

Questions:

What is a series circuit?

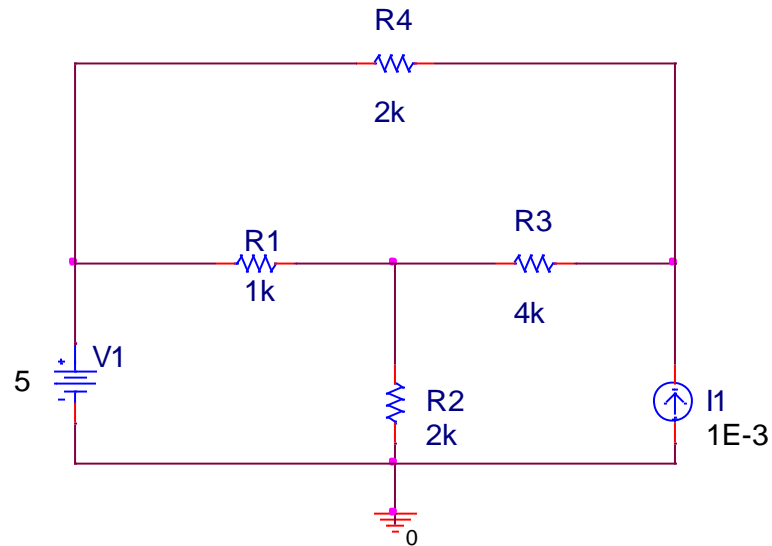
What is a parallel circuit?

How do we combine resistors in series? in parallel?

What is a voltage divider?

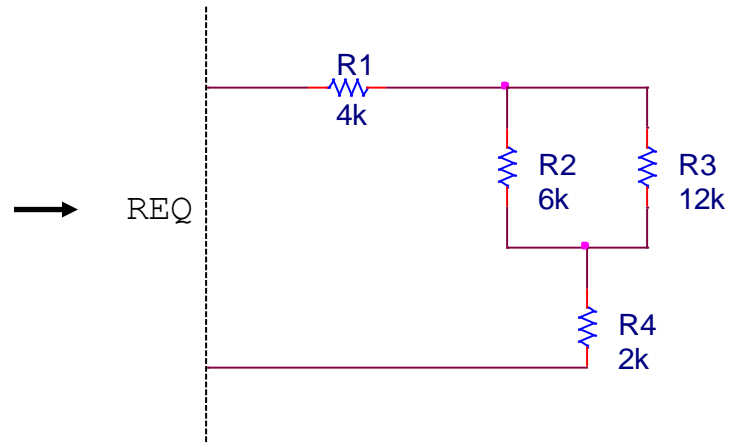
What is a current divider?

Review problem

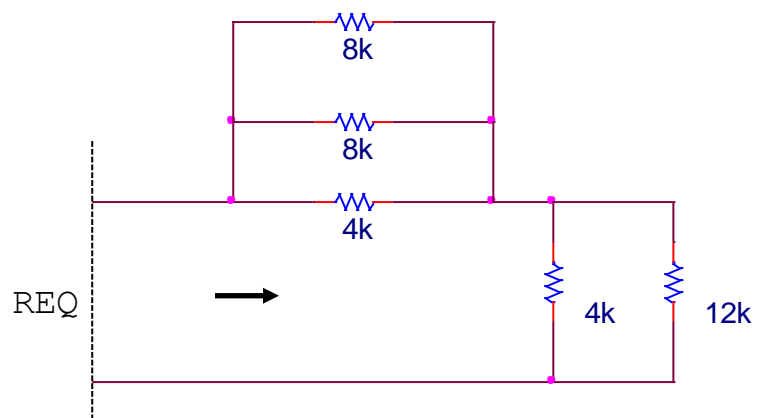


- Determine the voltage across each resistor. (*Answer: $V_{R1} = 1.3V$, $V_{R2} = 3.7V$, $V_{R3} = -2.2V$, $V_{R4} = -0.9V$*)
- Determine the power produced/consumed by V_1 and I_1 . (*Answer: V_1 4.25mW produced, I_1 5.9mW produced*)

Equivalent resistance

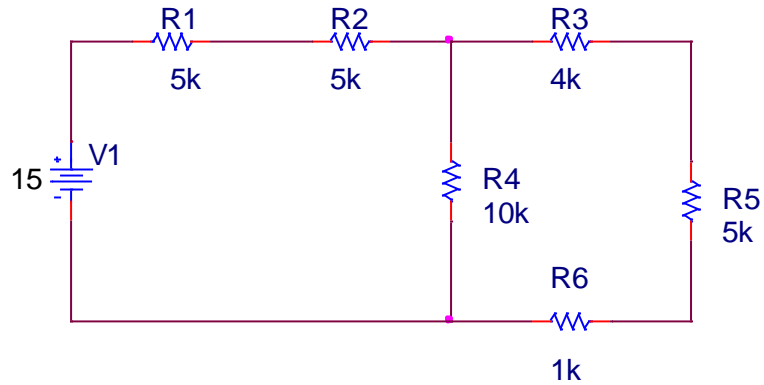


- a) Determine REQ (*Answer: $REQ = 10k$*)

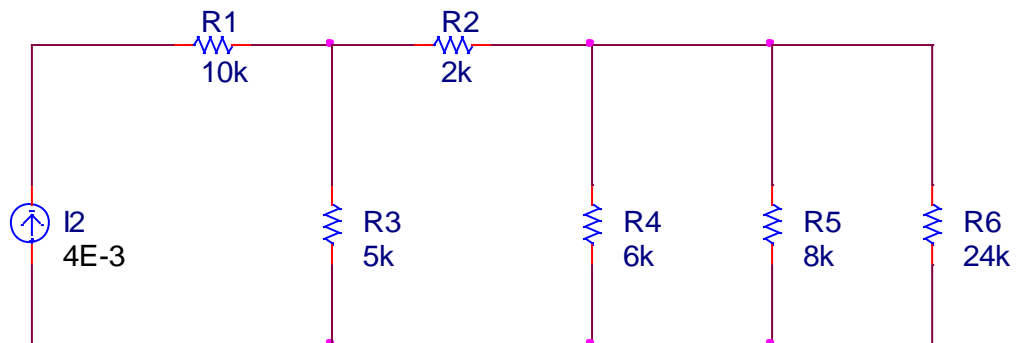


- b) Determine REQ (*Answer: $REQ = 5k$*)

Circuit reduction and voltage analysis



- Use circuit reduction to determine the voltage across R_4 (*Answer: 5 V*)
- Use circuit reduction to determine the voltage across R_5 (*Answer: 2.5V*)



- Use circuit reduction to find the voltage across R_3 . (*Answer: $V_{R3} = 10V$*)
- Use circuit reduction to find the current through R_4 . (*Answer: $I_{R4} = 1mA$*)